

REMARKS

Allegedly Defective Declaration

The Examiner states that “[t]he oath or declaration is defective because: It does not identify the mailing address of each inventor.” 3/7/2007 Office Action, page 2, second paragraph.

Applicants respectfully assert that the declaration is not defective because the mailing address of each inventor was provided on the application data sheet accompanying the parent application. The Examiner correctly acknowledges that the mailing address may be provided in an application data sheet. 37 C.F.R. § 1.63(c). At the time the parent application, Serial No. 10/063,687, was filed, the inventor addresses were included in the application data sheet, so they were not required in the declaration of the present application. Applicants are submitting herewith copies of the declaration and application data sheet from the parent application. Applicants therefore respectfully request that the objection to the declaration be withdrawn.

Claim Amendments

Claims 30-34, which were previously withdrawn from consideration, have been canceled without prejudice.

Claims 12 and 21 have also been canceled without prejudice.

Claims 1, 23, 24, and 27 have been amended to characterize the step of “extruding a composition” as “extruding a composition through a melt filter and a die to form a multiwall thermoplastic sheet”. Support for extruding the composition through a melt filter may be found, at least, in claims 21 and 23 of the present application as filed and in claim 21 of the parent application as filed. Support for extruding the composition through a die may be found, at least, in paragraph [0001] of the present application as filed and in paragraph [0001] of the parent application as filed. Support for the formation of a multiwall thermoplastic sheet may be found, at least, in the preamble of claim 1 of the present application as filed and in claim 2 of the parent application as filed.

Claims 1 and 23 have been further amended to recite the limitation that the extruded composition comprises “greater than or equal to about 85 weight percent” of the melt polycarbonate resin. Support for this limitation may be found, at least, in claim 12 of the present application as filed and in claim 12 of the parent application as filed.

Claims 1, 23, 24, and 27 have been further amended to recite the limitation, “wherein the multiwall thermoplastic sheet comprises a plurality of continuous hollow chambers”. Support for this limitation may be found, at least, in the abstract of U.S. Patent No. 4,707,393 to Vetter, which is recited in paragraph [0001] of the present application and paragraph [0001] of the parent application and is incorporated by reference via the statement in paragraph [0048] of the present application and paragraph [0048] of the parent application.

Claim 22 has been amended to depend directly from claim 1 rather than currently canceled claim 21.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1, 4-24, and 27 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. 3/7/2007 Office Action, page 3, second paragraph. In particular, the Examiner states that the limiting effect of the term “multiwall” is unclear. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Applicants respectfully assert that “multiwall thermoplastic sheet” is a widely used term of art that would be understood by a person having ordinary skill in the thermoplastic arts. However, in order to expedite allowance of the claims, Applicants have amended each of their independent claims to recite the limitation, “wherein the multiwall thermoplastic sheet comprises a plurality of continuous hollow chambers”. These amendments resolve any possible doubt about the limiting effect of the term “multiwall”. Accordingly and in view of the present cancellation of claims 12 and 21,

Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4-11, 13-20, 22-24, and 27 under 35 U.S.C. § 112, second paragraph.

Claim Rejections Under 35 U.S.C. § 102(b)

Claims 1, 4-8, 10, 23, 24, and 27 stand rejected under 35 U.S.C. § 102(b) over the alleged prior art admissions in the REMARKS of Applicants' 4/23/2004 Preliminary Amendment and the accompanying Evans Declaration under 37 C.F.R. § 1.132. 3/7/2007 Office Action, page 4, first full paragraph. In particular, the Examiner has stated,

In the REMARKS, Applicant states that it was discovered that in 1994 resin meeting the claimed polycarbonate Fries content limitation was employed to produce "single-wall polycarbonate sheet for commercial sale". Accordingly, claims 1, 23, 24, and 27 were amended "in order to limit their claims to multiwall sheet". However, the examiner notes that the amendment does not effectively limit the claims to multiwall sheet since the recitation has been entered in the preamble of the claims and the body of the claims are able to stand alone.

3/7/2007 Office Action, page 4, second full paragraph.

Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Applicants respectfully assert that the term "multiwall" effectively limited the claims as previously presented because that term was clearly added to distinguish any possible production of single-wall polycarbonate sheet using a resin meeting the compositional limitations of Applicants' claims. Clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art indicates that the preamble is a claim limitation because the preamble is used to define the claimed invention. *Brassica Protection Products LLC v. Sunrise Farms*, 301 F.3d 1343, 1347 (Fed. Cir. 2002). In view of the 4/20/2004 declaration of Thomas L. Evans and the associated remarks in Applicants' 4/23/2004 Preliminary Amendment, Applicants clearly relied on the preambular term "multiwall" to distinguish any possible production of single-wall polycarbonate sheet using a resin meeting the compositional limitations of

Applicants' claims. (Applicants further note that the Evans declaration does not state that "the claimed polycarbonate Fries content limitation was employed to produce 'single-wall polycarbonate sheet for commercial sale' " as the Examiner asserts. Rather, the Evans declaration states that that thirty-five batches of melt-polymerized polycarbonate resin were imported from GE Plastics' Chiba, Japan plant to GE Plastics' Mt. Vernon, Indiana plant at a time when the Mt. Vernon plant was producing single-wall polycarbonate sheet for commercial sale.)

Nevertheless, in order to expedite allowance of the claim, Applicants have amended each of their independent claims to positively recite formation of a multiwall sheet in the body of the claim. These amendments clearly distinguish any possible production of single-wall polycarbonate sheet.

Accordingly, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4-8, 10, 23, 24, and 27 under 35 U.S.C. § 102(b) over the REMARKS in Applicants' 4/23/2004 Preliminary Amendment and the accompanying Evans Declaration.

Anticipation Rejection over Brack

Claims 1, 4-22, 24 and 27 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,437,083 to Brack et al. ("Brack"). 3/7/2007 Office Action, page 5, first paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Brack generally describes process for the production of a branched aromatic polycarbonate that includes adding a branching agent to a polycarbonate oligomer, and producing a branched aromatic polycarbonate having a melt index ratio greater than an aromatic polycarbonate produced from the polycarbonate oligomer without the addition of the branching agent. Brack abstract.

Applicants' respectfully assert that claims 1, 4-22, 24 and 27 are patentable over Brack because Brack does not teach the melt filtration limitation of those claims. Anticipation requires that all of the limitations of the claim be found within a single prior

art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). For a rejection under section 102 to be proper, the cited reference must clearly and unequivocally disclose the claimed subject matter without any need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. *In re Arkley*, 172 U.S.P.Q. 524, 526 (C.C.P.A. 1972).

Applicants' independent claims 1, 24, and 27 as currently amended each positively recite "extruding a composition through a melt filter". The Examiner has stated,

As to claims 21 and 22, Brack et al. disclose an extrusion process (col. 1, lines 24-38). It is noted that extruders conventionally comprise breaker plates.

3/7/2007 Office Action, page 5, first paragraph. Applicants respectfully assert that there are two problems with this statement as an explanation of the rejection of claim 21 over Brack. First, Brack does not teach the use of breaker plates, let alone melt filters. Second, breaker plates are not the same as melt filters. Those of ordinary skill in the art know that a breaker plate is a perforated plate at the end of an extruder that is used to support a screen that keeps foreign particles out of the die. See, for example, <http://www.answers.com/topic/breaker-plate> (last visited 4/10/2007); and <http://composite.about.com/library/glossary/b/bldef-b774.htm> (last visited 4/10/2007). Furthermore, those of ordinary skill in the art appreciate that the holes or perforations in a breaker plate are much larger than those in a melt filter. To summarize, because Brack does not teach melt filters or breaker plates, and because breaker plates are distinct from melt filters, Brack does not anticipate claims 1, 24, and 27, which recite "extruding a composition through a melt filter". Given that claims 4-11, 13-20, and 22 each depend ultimately from and further limit claim 1, they too are not anticipated by Brack.

Claim 18 is further patentable over Brack. Claim 18 recites the limitation, "wherein the composition comprises less than or equal to about 5 ppm total halogen, based on the weight of the melt polycarbonate". The Examiner states, "As to claim 18, Brack et al. disclose that either halogen or hydrocarbon groups may be employed with the

bisphenol group (col. 5, lines 39-55).” 3/7/2007 Office Action, page 6, second paragraph. The Examiner appears to be arguing that a polycarbonate comprising less than 5 ppm would inherently be produced by a melt polycarbonate process using a bisphenol without halogen substituents. Applicants respectfully disagree.

“In relying on the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art.” *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990) (emphasis in original). Applicants respectfully assert that using a halogen-free bisphenol group is not the same as ending up with a composition comprising less than or equal to about 5 ppm total halogen. In particular, Applicants note that the a polycarbonate resin may comprise more than 5 ppm total halogen even when the polycarbonate is synthesized by a melt process because the diaryl carbonate reactant is conventionally derived from phosgene and therefore may comprise chloride ion impurities at concentrations substantially greater than 5 ppm. So, a polycarbonate comprising less than or equal to about 5 ppm total halogen is not necessarily formed in a reaction between a diaryl carbonate that is not halogen substituted and a bisphenol that is not halogen substituted. Accordingly, the claim 18 limitation is not inherent in the polycarbonate synthesis methods taught by Brack.

For all of the above reasons, and in view of the present cancellation of claims 12 and 21, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4-11, 13-20, 22, 24, and 27 under 35 U.S.C. § 102(e) over Brack.

Anticipation Rejection over Conn

Claims 1, 4, 5, 9, 10, 15-21 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent Application Publication No. 2003/0165685 of Conn et al. (“Conn”). 3/7/2007 Office Action, paragraph bridging pages 6 and 7. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Conn generally describes an ultraviolet protected multi-layer structure comprising a layer produced from a copolyester/polycarbonate blend, and a protective UV absorbing compound-containing polycarbonate cap layer. Conn abstract. The copolyester/polycarbonate blend of Conn comprises at most 40 weight percent polycarbonate. Conn, page 2, paragraph [0018].

Applicants respectfully assert that claims 1, 4, 5, 9, 10, 15-21 are not anticipated by Conn because Conn does not teach an extruded composition comprising at least 85 weight percent polycarbonate. Applicants' claim 1 has been currently amended to require that the extruded composition comprise greater than or equal to about 85 weight percent of the melt polycarbonate resin. Conn does not teach this limitation. As noted above, Conn's copolyester/polycarbonate blend comprises at most 40 weight percent polycarbonate.

Accordingly, Conn does not teach at least one limitation of claim 1, and Conn therefore does not anticipate claim 1. Given that claims 4, 5, 9, 10, and 15-20 each depend ultimately from and further limit claim 1, they too are not anticipated by Conn. Accordingly and in view of the present cancellation of claim 21, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4, 5, 9, 10, and 15-20 over Conn.

Obviousness Rejection over Brack + Numrich

Claim 23 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Brack in view of U.S. Patent No. 6,613,264 Numrich et al. ("Numrich"). 3/7/2007 Office Action, page 8, second full paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Applicants respectfully traverse the rejection because Brack is not available as a reference for a section 103 rejection. Section 103(c)(1) provides that

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed

invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. § 103(c)(1). Given that all the claims of the present application are supported by the parent application filed 5/8/2002, and given that Brack issued 8/20/2002 from an application filed 12/6/2001, Brack qualifies as prior art only under section 102(e). Brack and the claimed invention were also subject to an obligation of assignment to the same person (General Electric Company) at the time the claimed invention was made. Therefore, according to section 103(c)(1), Brack is not available as a reference for an obviousness rejection.

Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claim 23 under 35 U.S.C. § 103(a) over Brack in view of Conn.

Obviousness Rejection over Conn

Claims 6-8, 11, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Conn. 3/7/2007 Office Action, page 9, last full paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Conn is discussed above.

Applicants respectfully assert that claims 6-8, 11, 22, and 23 are patentable over Conn because Conn does not teach or suggest the polycarbonate concentration limitation of those claims. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all limitations of the claim be taught or suggested by the prior art. *See, e.g.*, MPEP 2143.03; *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974). Claim 1, from which claims 6-8, 11, and 22 ultimately depend, and claim 23 each recite an extruded composition comprising “greater than or equal to about 85 weight percent of a melt polycarbonate resin”. In contrast, Conn expressly teaches a composition comprising no more than 40 weight percent

polycarbonate. Accordingly, a prima facie case of obviousness has not been established, and claims 6-8, 11, 22, and 23 are patentable over Conn. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 6-8, 11, 22, and 23 under 35 U.S.C. § 103(a) over Conn.

Obviousness Rejection over Conn + Numrich

Claim 23 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Conn in view of U.S. Patent 6,613,264 to Numrich et al. ("Numrich"). 3/7/2007 Office Action, page 11, first full paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Conn is discussed above. Recall that the Conn compositions comprise no more than 40% polycarbonate.

Numrich generally describes processing of polycarbonate-containing injection molding materials into optically isotropic films in a chill roll extrusion method. Numrich abstract. The optically isotropic films are used as covering films for protecting data carriers (CD-ROMS) from becoming scratched, or they are used as supporting materials for the information layer. *Id.*

Applicants respectfully assert that claim 23 is patentable over the combination of Conn and Numrich because the cited references taken as a whole do not teach or suggest an extruded composition comprising "greater than or equal to about 85 weight percent of a melt polycarbonate resin". Applicants' claim 23 as currently amended requires that the extruded composition comprise "greater than or equal to about 85 weight percent of a melt polycarbonate resin". Conn consistently limits his composition to no more than 40 weight percent polycarbonate, and his preferred polycarbonate amount is 20 to 28 weight percent. Conn, page 2, paragraph [0018]. Numrich does not appear to expressly teach a range of polycarbonate concentrations, but the compositions used in his working examples appear to consist entirely of polycarbonate. There would be no motivation for one skilled in the art to contradict the express teaching of the primary reference Conn by reducing the minimum concentration of the primary resin component (copolyester) from

60 weight percent to 15 weight percent or less and increasing the minimum concentration of the secondary (polycarbonate) resin from 40 weight percent to 85 weight percent or more. In fact, given the contradictory teachings in Conn and Numrich regarding polycarbonate amount, it is unlikely that a skilled artisan would be motivated to combine these references. And, even if combined, Conn and Numrich do not fairly teach or suggest the claim 23 limitation of an extruded composition comprising "greater than or equal to about 85 weight percent of a melt polycarbonate resin", and a prima facie case of obviousness against claim 23 has not been established.


Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claim 23 under 35 U.S.C. § 103(a) over Conn in view of Numrich.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 50-3621 maintained by Assignee.

Respectfully submitted,

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